

petioles. In a majority of specimens examined the under surface of the leaf is deep purple but this character is not constant and degrees of purpling occur sometimes in other members of the group. The bracts of *H. puberula* are dark brown in color, narrowly lanceolate and ciliate on the margins and either glabrous or only glandular-puberulent on the back. In the allied species the bracts vary from 3-lobed to trifid to broadly oblanceolate with fimbriate margins and are more or less rusty villous on the back. The flowers are normally larger than in the varieties of *H. parviflora* and in *H. missouriensis*. The sepals are usually green-tipped and the petals have a narrowly lanceolate blade and a long slender claw. Sometimes they are almost linear. The mature capsules are 4–5.5 mm. long and the seeds are short-fusiform and faintly ridged.

The plants are calciphile, and occur on moist shaded ledges of limestone bluffs. They are fall blooming, most of the specimens observed in full flowering condition being collected from the latter part of September until late October. *H. missouriensis* on the other hand blossoms during July.

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SMILAX HISPIDA VERSUS S. TAMNOIDES

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FOR many years, the Bristly Greenbrier of eastern North America has been designated by the appropriate name, *Smilax hispida*. In 1944, Prof. Fernald (*RHODORA* 46: 38–39) changed his usage and argued that the correct name for this species should be *S. tamnoides*, the name which he adopted in the eighth edition of Gray's Manual. The purpose of the present short discussion is to evaluate the status of *S. tamnoides* and *S. hispida* as possible names for Bristly Greenbrier.

Linnaeus listed *Smilax tamnoides* in edition 1 of *Species Plantarum*. His brief description in Latin appeared on p. 1030 of vol. 2. Literally translated, this description indicates that *S.*

tamnoides has a prickly terete stem and leaves which are unarmed, many-nerved, cordate and oblong. Linnaeus cited Catesby's Natural History of Carolina, Florida and the Bahama Islands, vol. 1, p. 52, pl. 52, also he quoted the Latin name used by Catesby for the *Smilax*. From this polynomial designation the additional fact is available that the fruits are black. According to Linnaeus, *S. tamnoides* occurs in Carolina, Virginia and Pennsylvania.

Fernald stated in 1944 that *S. tamnoides* was based on two different items. The first was a specimen of the herbaceous *S. Pseudo-China*. The second and, according to Fernald, primary basis for Linnaeus' concept, was Catesby's plate 52 and accompanying description. According to Fernald's view, the plant illustrated and described by Catesby is the one which Coker (Jour. Elisha Mitchell Sci. Soc. 60: 48-49. 1944) called *Smilax hispida* var. *australis*.

S. tamnoides L. has been interpreted differently by various authors. Since Fernald stated that the species was based in part on a specimen which is the unarmed *S. Pseudo-China*, his view apparently is correct that the description of a prickly plant was not based primarily on the specimen in the Linnaeus herbarium. Accordingly, Catesby's description and illustration are all important in the typification of *S. tamnoides*. Readers who are able to consult Catesby's book will encounter a surprise when they examine plate 52. It depicts an anomalous greenbrier with a Crested Flycatcher perched upon it. The *Smilax* is anomalous because it has the long peduncles and clusters of 25-32 fruits characteristic of *S. Pseudo-China*, but, prickles and leaves as in *S. Bona-nox*. The prickles are sparse, slender, broadest at the base and green, quite unlike the abundant black bristles of *S. hispida*. In the description, Catesby described the peduncles as "above three inches long." This statement and illustration are in agreement with Coker's opinion expressed on p. 30 of the article already cited, that Catesby illustrated *S. tamnifolia* (= *S. Pseudo-China*) in plate 52. Coker's additional comment that Catesby's statement about the roots refers either to *S. lanceolata* or *S. auriculata* further illustrates the confusion about the interpretation of Catesby's plate 52. The impression created is that Catesby's illustration and description were pre-

pared from diverse materials. Probably no species exists with the combination of characteristics as depicted. In view of this situation, despite Fernald's claim that Catesby's plate is a beautiful match for *S. hispida* var. *australis*, a definite identification of this plate or accompanying description seems impossible. Catesby's *Smilax bryoniae nigrae foliis, caule spinoso, baccis nigris* is not capable of precise interpretation. If that is a primary basis for *S. tamnoides* L., as seems probable, then Linnaeus' name should be regarded as ambiguous. It should be deleted from further consideration. This conclusion enables us to continue to employ *S. hispida* Muhl. (Torrey, Fl. N. Y. 2: 302. 1843), probably based on plants both from Pennsylvania and New York, and clearly described as with the stems hispid and with the supplementary notes by Torrey that the prickles are slender and the fertile flowers about six in an umbel.

The Bristly Greenbriers of the Coastal Plain of the southeastern states, from Virginia to Texas, appear to differ from the northern and upland plants in their pandurate leaves of somewhat firmer texture. These have been named *S. hispida* var. *australis* Norton in Small. In accordance with the recent action of the International Botanical Congress regarding nomenclaturally typical subspecies and varieties (See Science 112: 444. 1950), the variety with ovate leaves should now be designated as *S. hispida* var. *hispida*.

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FOUR PLANTS NEW TO THE ILLINOIS FLORA.—During my field work in 1950, I found three species which are apparently new to the Illinois flora. A high school teacher called my attention to a fourth species.

SPECULARIA BIFLORA (R. & S.) Fisch. & Mey.—Palmer and Steyermark¹ reported this species from 16 counties in southern Missouri. Fernald² reported its occurrence as far north as southern Kentucky and Missouri in the Mississippi valley but did not include Illinois. I found this plant in three sites, two in

¹ Ann. Mo. Bot. Gard. 22: 375-746. 1935.

² Gray's Manual of Botany, ed. 8. 1950.